SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB

Shortia galacifolia

Oconee Bells

Spring 2022

Board of Directors

President	Joe Standaert
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MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see http://www.hendersoncountypublicschoolsnc.org) but NOT necessarily canceled because of the delayed opening.

For any change of address, email or telephone number, please send an email to wcbotanicalclub@gmail.com.

Our webpage is located at http://wcbotanicalclub.org

IMPORTANT: Don't forget that dues ($15) were due by the first of the year. Send dues to Western Carolina Botanical Club, 351 Cheestoonaya Way, Brevard, NC 28712

President's Message

Joe Standaert

Rites of Spring

Every year, after a long, cold and snowy winter we always anxiously look forward to the first signs of Spring. As you know, the Club has our "traditional" early spring first walks to Oconee Station and the Tryon / Saluda area to see the early flowers "down the mountain". Mary and I have several spots we like to visit early as part of our own rite of spring. First, in Montreat, we have a nature trail where folks planted 5 or 6 patches of Oconee Bells years ago and also some Trout Lilies, so we always check these in late February. Our other favorite early Bells trip is down in McDowell County north of Marion on the north fork of the Catawba. We visit the originally discovered Oconee Bells patches found by George and Mordecai Elisha Hyams 100 years after Michaux's initial collecting. These are, of course, the var. brevistyla (short-styled) variety, different than the Lake Jocassee area galacifolia variety. Our other early favorite is to check the progress of the wonderful early plants down at Twin Bridges near Tryon to see the Spring Beauties, Hepatica and early beds of Sweet White Trillium. So, it is Soring !! Follow your own botany traditions or join the club walks as we follow the season, south to north !!

Preparing For Field Trips

Because we didn't have any indoor meetings this year, we were unable to hold the presentation describing what to expect if you come on a field trip. With many new members we thought it might be helpful to include part of it in this issue of Shortia.

- Read the information on pages 1 & 2 & the back pages of the schedule, where carpool meeting places are listed along with Google map locations
- Cancellations will be emailed by 7 am or you can always call the Leader for confirmation. If you text, please include your name
- Be prepared for all kinds of weather
- Print the plant list
- Bring a pencil or pen, snacks/lunch, & water
- Wear your name tag
- Borrow plant books until you find one you like
- Try a member's loupe or magnifier or binoculars and see if you like using them
- Check previous posts on our website wcbotanicalclub.org to see what plants to expect

What's in a Name – *Clintonia*

By Penny Longhurst

Each spring I look forward to seeing the Clinton Lilies bloom. Because our stomping grounds in this area range from low to high elevations, we are fortunate to see two different species of them! The genus *Clintonia* is named after DeWitt Clinton, sixth Governor of New York, and builder of "Clinton's Ditch".

DeWitt Clinton was born near Newburg, New York in 1769. He attended Princeton University and then transferred to Columbia University where he received a BA before going on to practice law. A classmate at Columbia was David Hosack, creator of America's first botanical garden, the Elgin Botanic Garden. Upon graduation DeWitt went to work as private secretary to his uncle, New York's first Governor, George Clinton. After his uncle retired from politics, DeWitt returned to Columbia to study chemistry, zoology, and botany under Hosack. DeWitt Clinton was a member of the Democratic-Republican Party founded by Thomas Jefferson and James Madison (the ancestor of today's Democratic Party). A busy man, his political career included stints as a member of the New York House of Representatives and the State Senate, member of the U.S. Senate, and Mayor of New York. He was elected Governor of New York in 1817 and died in office in 1828.

Clinton supported plans to construct a canal between Lake Erie and the Hudson River at Albany to facilitate trade between the Midwest and New York City. In 1810 the Canal Commission, which included Clinton and Hosack's nephew, David Eddy, a geographer and botanist, set out to survey the route. Eddy drew maps of the route between Lake Erie and the Hudson River and collected plants. Clinton kept a diary of the trip where he documented geographical features as well as plants, birds, and animals seen along the route. On July 12th, 1810, near Rome, NY, he wrote "On the banks of the creek were plenty of boneset [boneset], the Canada shrub, said to be useful in medicine, and a great variety of beautiful flowering plants. Wild gooseberry bushes, wild currants, and wild hops were also to be seen. The gooseberries were not good; the hops are said to be as good as the domestic ones." On July 29th near Rochester, he wrote "We saw along the road great quantities of ginseng, a beautiful convolvulus, or vine, with a delicate jessamine-like flower, which General N. has naturalized in his garden. Wherever there have been clearings in the wood, by the agency of fire, we saw the weed called fire-weed, which is always to be seen in such situations, and is made use of as an argument in favor of spontaneous or equivocal vegetation." Some opportunistic plants never change!

In 1817 the NY State legislature finally approved construction of the canal, often known as "Clinton's Ditch". Work began on July 4, 1817, at Rome, and the first section between Rome and Utica opened in 1819. When completed in October 1825, the canal was 363 miles long, 4 feet deep, 40 feet wide, had 83 locks, 18 aqueducts carrying the canal over rivers, a 10-foot towpath, and could carry boats holding 30 tons of freight. After it opened, transit time between Buffalo and Albany decreased from 2 weeks to 5 days and New York City became one of the principal ports in the country. In addition, passengers using the canal to travel west stimulated growth of the cities in western New York State and beyond. The canal was such a success that it was enlarged to 7 feet deep and 70 feet wide, permitting freight loads up to 240 tons to be carried. The original canal went all the way into Albany, ending near downtown where Corning Park is located today. The new route ended in Waterford, near where the Mohawk River flows into the Hudson. Commercial use on the canal decreased in the second half of the 20th century due to competition from road and railways, but it is still open as the Erie Canalway National Heritage Corridor and used principally by recreational boaters. The towpath is used as a walking and biking trail. I visited waterfalls near the section between Buffalo and Rochester last fall and really enjoyed the opportunity to see the canal.

Clinton was interested in the natural sciences. During construction of the Erie Canal, he collected fossils and plants along its route. He published papers on natural science in several journals and corresponded with Linnaeus, Gronovius, and Collinson. In recognition of his interests, Clinton was elected a member of the

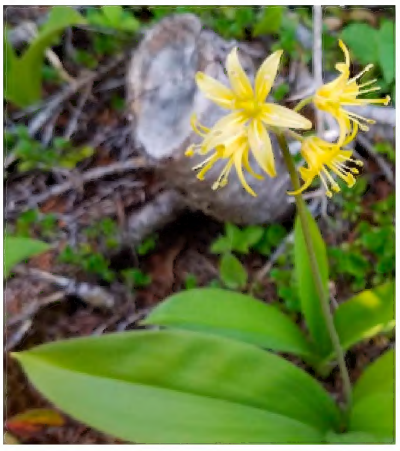
Linnaean Society of London. David Hosack, a close friend of Clinton, wrote in his memoir "In the knowledge of many of the physical sciences, particularly zoology, botany, and minerology, Mr. Clinton eminently excelled, especially in the first and last of these departments of natural history." He continued "In botany, he was intimately acquainted with the general principles of the Linnaean system, and had an extensive knowledge of those plants which are most useful, and are employed as the objects of agriculture, medicine, and the arts; to the more minute details he was less attentive, than to the great general principles of that science." Hmm. Bit of a back-handed compliment?

The genus *Clintonia* (formerly *Dracaena*) was named in 1836 by Rafinesque who wrote in his "New Flora and Botany of North America" "Dedicated to my friend the worthy D. Clinton a worthy Philosopher, Naturalist and Botanist as eminent as Jefferson". It is unknown whether Clinton saw or collected *Clintonia*, but both *C. borealis and C. umbellulata* are commonly found in upstate NY, so it is probable. Four *Clintonia* species can be found in the US, but only two, Bluebead Lily (*Clintonia borealis)* and Specked Wood-lily or White Clintonia (*Clintonia umbellulata)*, grow in our area.

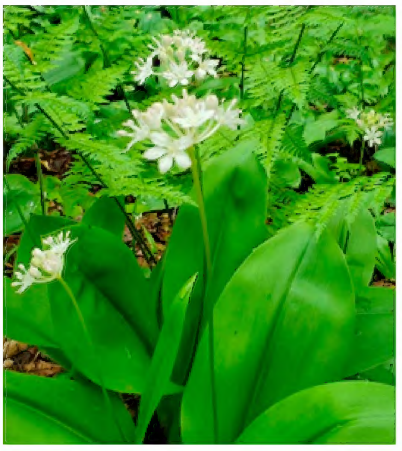
Clintonia borealis, as the name suggests, is a plant of the northern forests or higher elevations. Where I have seen it in Newfoundland, Nova Scotia, and the northeastern states it grows almost like a ground cover. In the southern Appalachians it is principally found in the mountains. However, beware, because *C. umbellulata* sometimes grows here in the same locations and in the absence of flowers it can be difficult to tell them apart although the leaves of *C. borealis* are less hairy than those of *C. umbellulata*. *Clintonia borealis* plants bear 4 to 8 yellow flowers in a loose drooping umbel that almost looks like a raceme. The berries are usually bright blue, hence its common name.

Clintonia umbellulata, much more common in this area than *C. borealis*, is found in the Appalachian Mountains and up into western New York State. The leaves have a hairy midvein underneath and hairs on the margins. Next time we see Clinton Lily leaves we need to check that out; I rarely get that close to the ground. The plants bear 5 to 25 white flowers (sometimes speckled with red/purple) in a tight rounded umbel. Thus, the location and number of pedicels within the umbel can also be a means of distinguishing *C. borealis* from *C. umbellulata*. The berries are usually black, but can sometimes be bluish, and are not a reliable method for distinguishing between the two species.

Queen's Cup (*Clintonia uniflora*) has white flowers and is found in the western states. I've seen it in Idaho, Oregon, and Washington. Superficially the leaves look just like those of our *Clintonia* species. As predicted by its name, each plant bears a single flower. I have not seen *Clintonia andrewsiana* which grows primarily in California and looks a little like *Clintonia umbellulata,* but with red flowers.



Bluebead Lily
(*Clintonia borealis)*



White Clintonia
(*Clintonia umbellulata)*

Queen's Cup
(*Clintonia uniflora*)

Although *Clintonia* was named after DeWitt Clinton it was his third child, George W. Clinton, who was the real botanist in the family. Born in 1807, George grew up in Albany, NY. Educated at Hamilton College, he went on to study law. In 1836 he moved to Buffalo where he became Mayor and later Chief Judge of the Superior Court. A natural history enthusiast, he founded the Buffalo Society of Natural History. George moved back to Albany after being appointed Vice-Chancellor of the State University system and died in 1885 while "engaged in a botanical expedition" in the Albany Rural Cemetery, with notebook and flowers in hand.

In 1826 George was invited to join a student field trip organized by Amos Eaton, Professor of Natural Sciences at the newly created Rensselaer School, now Rensselaer Polytechnic Institute. The group, including 16 to 18 students, chartered a canal-boat to take them from Albany to Buffalo on the newly opened Erie Canal. The "accoutrements" he took with him included Eaton's Manuals of Geology and Botany and a plant press. They left on April 29th, reaching Rochester on May 14th. On the 17th they stopped at Medina Falls. I was there last October. In this location the canal crosses over Oak Orchard Creek and the waterfall on a long and high aqueduct; a very interesting sight. However, George was not impressed, writing "About 30 rods below the aqueduct is a small fall of about 20 or 30 feet; it would possess but little to interest, however, were it not for the fact that it is formed entirely of a grey sandstone". Well! I thought it was a pretty good waterfall! After reaching the canal's end near Buffalo, the students walked 11 miles to see Niagara Falls on May 19th. George wrote "I have now seen the greatest fall (all circumstances considered) in existence, and must confess that it did not make a durable impression on me.")! Clearly George was hard to please! He arrived back in Albany on June 11th. Quite a trip!

Like his father in 1810, George kept a diary of his voyage. George's diary is much more interesting and includes much more botanical information than his father's diary from 1810. George was clearly an avid botanist; the diary is peppered with botanical names, many of which have, of course, now been changed. Early on in his trip, he documents finding Coltsfoot (*Tussilago farfara*), a non-native plant that apparently spread easily during the short time it must then have been on this continent. A common plant in NY state, fortunately I've seen it in only one place here. Other plants he saw that we are more familiar with included Mountain Maple (*Acer spicatum*), Blue Cohosh (*Caulophyllum thalictroides*), Water Hemlock (*Cicuta maculata*), Common Fleabane (*Erigeron philadelphicus*), Showy Orchis (*Orchis spectabilis*, now *Galearis spectabilis*), Purple Bluets (*Houstonia purpurea*), Virginia Waterleaf (*Hydrophyllum virginianum*), Solomon's Plume (*Convallaria racemosa*, now *Maianthemum racemosum*), Indian Cucumber Root (*Medeola virginiana*), May Apple

(*Podophyllum peltatum*) which was blooming at Niagara, Solomon's Seal (*Convallaria biflorum*, now *Polygonatum biflorum*), another non-native, Common Chickweed (*Stellaria media*), American Mountain Ash (*Sorbus americana*), Early Meadow Rue (*Thalictrum dioicum*), Red and White Wake Robins (*Trillium erectum*), Painted Trillium (*Trillium pictum,* now *T. undulatum*), one of my favorites, Deerberry (*Vaccinium stamineum*), another favorite, Hobble Bush (*Viburnum lantanoides*), Canada Violet (*Viola canadensis*), Marsh Blue Violet (*Viola cucullata*), and Long-spurred Violet (*Viola rostrata*). Not bad for a scouting trip! There is, however, no mention of seeing any *Clintonia* or *Dracaena* species, even though Rafinesque joined the boat on the return trip and 10 years later would name the genus after George's father. Although Rafinesque was an admirer of DeWitt Clinton, Eaton thought George was the better botanist, writing in a letter to Silliman shortly after the trip that George was "our Governor's son and the greatest genius of the name – his father is a pygmy in comparison."!

After moving to Buffalo and becoming politically active, George's interests in botany decreased and he gave away his botanical texts and herbarium. However, in his late fifties he started collecting again and corresponding and exchanging plants with the prominent botanists of the day, including Asa Gray. Gray named *Scirpus clintonii* (Clinton's Bulrush, now *Trichophorum clintonii*) after George, and he is acknowledged numerous times in Gray's "Manual of the Botany of the Northern United States" for providing plants. The Niagara Frontier Botanical Society named its newsletter Clintonia in his honor. When he moved from Buffalo to Albany in 1882, George donated his herbarium of over 20,000 species of plants, mounted and labeled by him, to the Buffalo Museum of Science. The Clinton Herbarium at the Museum is named after him, the museum's first president.

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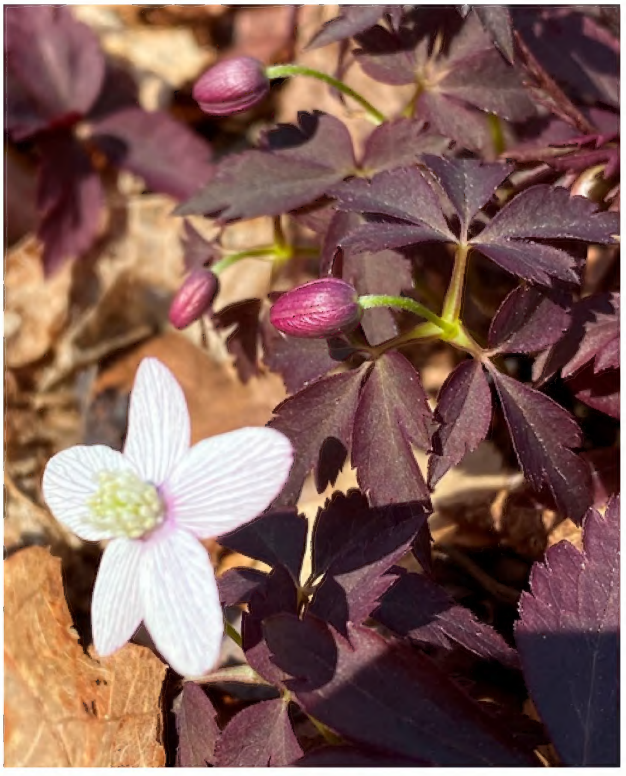
Anemone quinquefolia and lancifolia

Lucy Prim

Early this April I was supposed to lead a Friday walk along Lower Cat Gap trail, but since the bridge across the creek had gotten washed out we had to reroute our walk and go along the dirt road on the other side of the creek, which more or less parallels Cat Gap and then the two intersect about a mile further up the creek. We hadn't gone on this dirt road before, since the other way is in the woods and is such a delightful walk, but it turned out the washed-out bridge situation wasn't unlucky for us after all. Our walk along the dirt road had lots of beautiful flowers for us to see. As so often is the case, a road opens up the woods to more sunshine, and that often means more flowers, and that's exactly what we found. I have never seen so many Anemone quinquefolia before, so many patches of it all along the dirt road. Some of it was up on the bank, some in the shade, some in the sun right beside the road, some mixed with violets, some in the moss. One thing that struck us was the patches of decidedly purple Anemone— purple leaves and purple flowers both. They were in big patches, sometimes right beside a patch of the usual green-leaved anemones. Such a striking difference they were, and so close together. Both patches seemed to be getting the same amount of sun. Why were they such different colors?



We crossed the creek a mile up the road and then most of us continued on Cat Gap following the path on up the hill. Along this section of the trail, I found anemone buds that were blue! It seemed the blue disappeared when the flowers opened, but the closed-up buds were definitely a pale blue. It was such a treat and a curiosity to see these other colors, so different from the pure white anemone we were seeing at Twin Bridges just the week before.

Did you know there is another species of Anemone we might find that looks almost identical to A. quinquefolia? It is Anemone lancifolia! (And if you are feeling skeptical, I just checked and yes, it is indeed accepted by ITIS!)

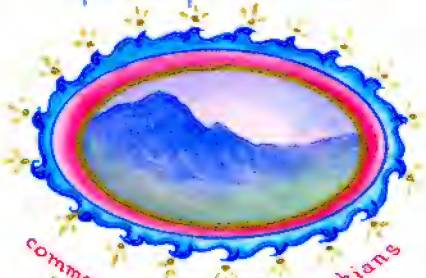
How is this plant different from our familiar *Anemone quinquefolia*?

1. The most obvious difference is that the leaves are cleft into three leaflets and do not appear to have 5 leaflets as does *A. quinquefolia*.
2. It is more likely to be found at lower elevation mountains and into the Piedmont.
3. It is altogether bigger than *A. quinquefolia*, the sepals usually 15 mm or more long whereas with *A. quinquefolia*, they are 6-15 mm long.
4. It is an uncommon plant, whereas *A. quinquefolia* is very common.

It will be fun to look for this plant as we go out and about on lower elevation walks in the spring.—When we come upon a patch of *Anemone*, we can scan the leaves to see whether they appear to have 5 leaflets or 3. If most of them have three leaflets, then we may have found *Anemone lancifolia*!

Anemone

quinquefolia

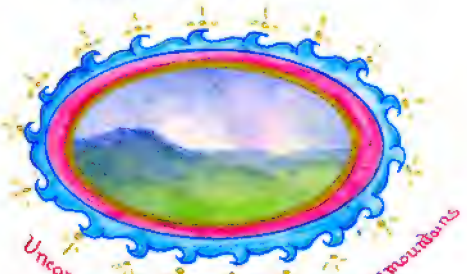


common throughout Appalachians

Many leaves deeply cleft, appearing to have five lobes.

Terminal leaflet broadest and serrated at and above middle

lancifolia



Uncommon - look for it in piedmont + low mountains

Most leaves have three lobes.

Terminal leaflet broadest and serrated at and below middle.

Plants We Love to Hate – Dogfennel

By Penny Longhurst

There are two different plants with the common name “Dogfennel” in our database; one is native and the other non-native. Initially, this paper will focus on the native plant, *Eupatorium capillifolium.* When we talk about it there are usually two types of reactions. People say, “Oh that’s a terrible weed” and then “But it has pretty flowers”! The name Dogfennel is probably derived from its fennel-like odor which dogs apparently like. Some sources split the word, for instance “Dog-fennel” or “Dog fennel”, but since ITIS writes the common name as “Dogfennel” that will be used here.

The Dogfennel we are most familiar with is *Eupatorium capillifolium*, native to the southeast United States.

The species name *Eupatorium* is derived from Latin, meaning "medicine". *Eupatorium capillifolium* is poisonous to mammals. However, alkaloids that repel mosquitos have been extracted from the plant. Extracts have also been applied topically as an antifungal and to treat reptile and insect bites. The epithet *capillifolium,* also derived from Latin, means "hair" and "leaf" referring to its narrow leaves. We've recorded seeing *Eupatorium capillifolium* at Glassy Mountain and Bad Creek. It also grows in DuPont State Recreational Forest, at Ashmore Heritage Preserve, and along the Henderson County Walkways. Several plants grow in my neighborhood and probably in yours too.

Eupatorium capillifolium is a tall perennial with stiff hairy stems that can reach 6- or 7-feet tall. It's usually found in sunny spots along roads or in cleared areas. The leaves are bright green and feathery on slim side branches. In late summer, numerous attractive small greenish-white flowers appear which are wind pollinated. Its seeds are surrounded by hairs and dispersed by the wind, like thistles and dandelions. It easily establishes itself in receptive new locations, becoming an aggressive weed.

The non-native Dogfennel is *Anthemis cotula*, also known as Stinking Chamomile, Stinking Mayweed, or Dog Fennel. An annual native of the Mediterranean region, it is now found worldwide. Fortunately, according to Flora of the Southeast, it is much less common in this area than the native plant. Joe's picture was taken at Split Rock State Park in Minnesota! According to our database, we've identified it at Foothills Equestrian Nature Center (FENCE), on the Bad Creek trail, and at Flat Rock Park, although we don't have any photographs. *Anthemis cotula* flowers resemble those of Oxeye Daisy, but the leaves look like those of Chamomile and are finely dissected. When crushed they emit a nasty smell. Next time we're at Bad Creek we need to keep a sharp lookout and make sure we're not confusing the young leaves of these two Dogfennels. Let's crush those smelly leaves!

Acknowledgements: Thanks to Ken Borgfeldt, our Master Recorder, for providing the data on plant sightings and Joe Standaert for the photograph of *Anthemis cotula*.

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SHORTIA

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Editor: Ken Borgfeldt

1Q 2022
The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. Membership is open to all. Individual/family memberships are $15. Send dues to Western Carolina Botanical Club, 351 Cheestoonaya Way, Brevard, NC 28712

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President's Message

Tradition !

I was recently reminded of the 1971 Musical, *Fiddler on the Roof,* featuring Tevye, the Jewish family patriarch in the small European village Anatevka. In particular, the theme song, *Tradition!* Is Tevya's attempt to deal with changes in life.

At a recent board meeting, we had a discussion about the future of our quarterly *Shortia.* The thought was to discontinue publishing and replace it with an *ad hoc* blog on the *Shortia* page on our website. *Shortia* has been edited in recent years by Lucy Prim and Ken Borgfeldt and has been a lot of work. In addition, it was hard to get articles submitted and most of the recent technical articles were done by Penny Longhurst and Lucy, which was even more work. So, the Board initially decided to eliminate publication and replace it with a blog format. However, I went to the *Shortia* webpage after the meeting and read that it has been published since the Spring of 1979. *Tradition!!*

Independently, Ken and several other board members came to the same conclusion that we should not discontinue *Shortia*. Ken will continue to edit an electronic version and include basic club info, the President's message and any submitted articles. If no articles are submitted, although still encouraged, Ken will include some photography items T*radition continues!*

The second topic at the Board meeting was about the fact that Club was established on March 23, 1973 and this March will be the Club's 50th Anniversary! *Tradition!! Tradition!!* So, we need to start planning for a special event for next spring and maybe even a year-long celebration! The club has had special events for the 30th Anniversary and the 40th Anniversary. *Tradition!*

I think we need a small committee to work on this and maybe come up with a special logo or letterhead that we can use all year!

Anyway, my thoughts on our *Traditions!!*

I hope to see everyone at our 2022 Annual Meeting at Holmes State Educational Forest on July 8th!!

Joe Standaert

"El Presidente"

Frasier Fir (*Abies fraseri*)

Recorded Locations: Wagon Rd Gap to Balsam Gap, Haywood Gap, Bear Pen Gap, Flat Laurel Creek, Palmetto Trail / Blue Wall Preserve, Black Balsam to Looking Glass, Frying Pan Gap Trail, Skinny Dip Falls, Sam's Knob Meadow, Mt. Hardy Loop.

Mountain Fetterbush

By Penny Longhurst

It's always confusing when two plants have the same common name, especially when they both grow in approximately the same location. Here in the Southern Appalachians, we have two shrubs named Mountain Fetterbush. One, *Pieris floribunda*, is evergreen and the other, *Eubotrys recurva*, is deciduous, but the use of their common name can still cause problems.

The name, Fetterbush, is derived from an Anglo-Saxon word meaning to "impede". Certainly, moving through large patches of *Pieris floribunda* can be difficult. The Painted Trillium Trail has a particularly large number of plants that later in the year frequently impede passage! *Eubotrys recurva* is not so much of an impediment. It certainly doesn't grow in dense thickets like the evergreen version, which often forms what looks like hedges along the Blue Ridge Parkway.

Pieris floribunda, was first described and named *Andromeda floribunda* in 1814. Its name was changed to *Pieris floribunda* in 1876. The genus name, *Pieris*, derives from Pieria, a place in Greece which according to Greek mythology was the home of the Muses. The specific epithet, *floribunda*, comes from the Latin word *floribundus* meaning profusely flowering. Its native range is the southern mountains of North Carolina and the mountains bordering West Virginia and Virginia. It grows in profusion along the Blue Ridge Parkway and trails between Graveyard Fields and Hwy 215.

Pieris floribunda has dark green leathery evergreen leaves, similar to *Kalmia latifolia*. The blooms, which appear in the spring, are white and bell-shaped, in a terminal cluster. New flower buds appear in late summer or fall. The fruit are round. Initially green in color, they turn brown and split open when ripe.

Pieris floribunda - blooms & leaves

Pieris floribunda - fruit & new flower buds

Eubotrys recurva - blooms

Eubotrys recurva – leaves & fruit

Eubotrys recurva was first described by Buckley in 1843 and named *Andromeda recurva.* Its name was changed to *Leucothoe recurva* by Asa Gray (an alternate common name is Recurved Doghobble which it resembles), but subsequently named *Eubotrys recurva. Eubotrys* is derived from the Greek meaning "good bunch" referring to its tight raceme. The specific epithet, *recurva*, refers to the recurved or bent shape of the terminal branches and racemes. It is found in the Appalachian Mountains of North Carolina, Tennessee, and Virginia. In contrast to *Pieris floribunda*, which seems to grow in large thickets, *Eubotrys recurva* plants are generally more isolated. The club has found it on Big Ridge Trail, Painted Trillium Trail, and at Whiteside Mountain.

Eubotrys recurva is deciduous. It's an early bloomer – its flowers, which appear in early spring, are white and urn-shaped hanging down on one side of a curved raceme and appear before its pale green leaves emerge. The round fruit, initially green but later brown, retains its long and distinctive styles, as shown in the photograph above.

I confess, although I have no problem distinguishing the two Mountain Fetterbush species, I do sometimes confuse *Eubotrys recurva* with Maleberry (*Lyonia ligustrina*). This really shouldn't happen for several reasons. Although superficially the leaves and stems of *Eubotrys recurva* and *Lyonia ligustrina* may look similar there are important differences between them.

Lyonia twigs are yellowish or light brown. Its blooms are not bell- or urn-shaped – they're rounder, shaped more like some *Vaccinium* flowers. The flowers surround the raceme, rather than being one-sided, like *Eubotrys recurva,* and appear after the leaves emerge. Like *Eubotrys recurva*, the shrub is deciduous. The fruit is round, also surrounds the stem, and lacks the long style seen in *Eubotrys recurva.*

Lyonia ligustrina – blooms & leaves

Lyonia ligustrina - fruit

There are nice *Lyonia ligustrina* plants on the Sam Knob Meadow trail just before the steps and in Ashmore near the intersection of the trail and the dam. Hopefully, when I next see one elsewhere, I will be able to easily distinguish between it and *Eubotrys recurva*!

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Three-seeded Mercury (*Acalypha rhomboidea*)

Recorded Locations: FENCE, Holmes Educational State Forest, Jackson Park, Kanuga Conference Center, Park at Flat Rock.

20150918_Three-seeded Mercury (Acalypha rhomboidea) Leaves and Plant

20051111_Three-seeded Mercury (Acalypha rhomboidea) Seeds

20080905_Three-seeded Mercury (Acalypha rhomboidea) Bloom

Weakley's Flora – 2022 Edition now available…

By Joe Standaert

Dr. Alan S. Weakley, from the UNC Chapel Hill Herbarium, has been working for years to develop a modern Flora of the Carolinas and the Southeast. The "bible" for the Carolinas for years has been the *Manual of the Vascular Flora of the Carolina* by Albert E. Radford, Harry E. Ahles, C. Ritchie Bell (i.e. RAB). This is a technical botany manual with extensive keys, descriptions, and range maps with only line drawings to illustrate the plants. It covered 3,200 species and was approximately 1,500 pages. (I still use this!). However, it was published in 1968, so a lot of the nomenclature and species names have been changed with recent scientific studies and DNA analysis. So, the aim of Dr. Weakley has been to update this *Flora.* He has been releasing drafts of his new Flora for years and has been publishing, for free, in an on-line pdf document. This is handy because you can load on your Kindle for the field, or what I do… print several selected pages if I know I will be looking at, say Sunflowers, on a particular trip. The Flora is still a very technical, key-based, comprehensive botany manual, much different than the typical "Picture" field guides which have only limited species coverage and minimal technical keys.

In any case, in April Dr. Weakley released his 2022 draft version of his *Flora* which is free to download. (see: http://www.herbarium.unc.edu/flora.htm or https://ncbg.unc.edu/research/unc-herbarium/floras/ under the Floras, Apps, and Field Guide link). In addition, he has several state level versions of the *Flora*, so you can download just the Flora of North Carolina for example. A new handy spreadsheet file is also available for your use in your own photo captions or personal checklists. The download request page spreadsheet has all the species, scientific names, common names, family, native/non-native status, and where found. This spreadsheet can be downloaded from https://ncbg.unc.edu/research/unc-herbarium/flora-request/. There is also a quick guide on how to use the very large pdf file efficiently with tips for its usage. (See: https://ncbg.unc.edu/research/unc-herbarium/flora-help/)

There are several other useful items on these web pages that you may want to look at. There is a link to the Flora of Virginia Project app and book (purchase items), Weakley's hardcopy picture-based field guide (purchase item), and some helpful descriptions and pictures of the Common Trees of the Piedmont, although the associated app does not seem to be available. (http://www.ibiblio.org/openkey/intkey/index.htm)

For those who are not familiar with technical botany manuals, it is important to know that the decisive way to identify a plant accurately is to use a technical manual, which covers all the plants in your area, and follow "keys" to accurately describe the difference between similar species. In most cases, a technical botany manual has very detailed botany "Jargon". It is helpful to refer to the glossary in the book or, better yet, get a book like: Harris, J.G. and Harris, M. Woolf. 1994. *Plant Identification Terminology*. Spring Lake Publishing, Spring Lake, UT.

A "key" is short for a Dichotomous Key, which literally means "two choices". To use a key, you are presented with two choices each step of the way and as you proceed down the choices, you will narrow down to, hopefully, a single choice of species. It is not quite that simple because you may not have all the parts of the plant that the key refers to (like no fruit present) and most likely, you are confused on the terms and take a wrong choice and go down the wrong "bunny trail". As an example of how to use a key, I developed this

simple evergreen tree key for one of the courses I taught. As you can see from the key, you work your way down all the choice pairs to get to an answer. Try it with a pine tree or from your front yard.

KEY 1 – PLANTS WITH NEEDLELIKE or SCALELIKE LEAVES

1. Leaves Needlelike, > 8mm long
    2. Needles in bundles of 2 to 5…….. PINE, see Key 2
    2. Needles borne singly:
        3. Twigs rough by peg-like stubs after needle fall, cones down
            4. Needles sharp pointed, 4 sided……RED SPRUCE
            4. Needles blunt, flat, short stalked…… 5 (HEMLOCK)
                5. Needles < 15mm long, flattened plane on twigs….EASTERN
                5. Needles > 15 mm, spreading all directions……..CAROLINA
        3. Twigs with smooth, circular scars after needles, cones up….FRASER FIR
1. Leaves Scalelike, <5mm long
    6. Twigs 4-angled, leaves scalelike older trees, needlelike younger….. RED CEDAR
    6. Twigs flattened, in sprays, often fan-like, all leaves scale-like… WHITE CEDAR

KEY 2 – PINES

1. Needles in bundles of 5…….. WHITE PINE
1. Needles in bundles of 2 or 3…….Go to 2
    2. Needles mostly 6-14 cm, in 2's or 3's
        3. Needles mostly 2's, some 3's, slender, straight, soft, flexible, bluish-green……. SHORTLEAF PINE
        3. Needles in 3's, stout, stiff, twisted, yellowish green, cones armed with sharp prickle…. PITCH PINE
    2. Needles mostly 2-6 cm long, in two's
        4. Needles 1mm wide or less, firm or flexible, yellowish-green cones small prickle 1-3mm long…….. VIRGINIA or SCRUB PINE
        4. Needles >1mm wide, stiff, dark green or bluish-green, cones with stout upturned prickle 3-6 mm…..TABLE MOUNTAIN PINE

Plants We Love to Hate – *Packera aurea*

By Penny Longhurst

Golden Ragwort (*Packera aurea)* is one of the first spring flowers that we notice each year, growing alongside roadways, creeks, and field edges. Let's face it, it seems to grow just about everywhere! Its cheery yellow flowers can brighten up anyone's day, and the basal leaves produce a great ground cover. But I confess, much as I like seeing it, it can be a bit of a weedy pest. The golf course near my house seems to have been invaded by the plant, and when one showed up in the flower bed outside my front door, I moved it lickety-split!

The plants in the genus *Packera* (Ragworts) were formerly members of the *Senecio* genus, first named by Linnaeus in 1753. The word *Senecio* is derived from the Latin for "Old Man", referring to the gray or white hairs found on many *Senecio* plants. Many *Senecio* species are considered weeds, and a common name for them is "Groundsel", derived from an Anglo-Saxon word meaning "ground-swallower", referring to their propensity to spread. Many books still use *Senecio* as the botanical name for Ragworts, which can be a bit confusing when you're trying to look them up in the index.

In 1975, Áskel and Doris Löve reclassified 1,629 species of plants found within the northern tundra! The members of the new genus that they named *Packera* differed from those of *Senecio* by having prolonged rhizomes and differences in their basal chromosome number. They wrote "It is our pleasure to name the new genus in honour of John G. Packer an oldtime friend who has contributed much to the clarification of the status of the arctic-alpine North American members of the taxon". John Packer was born in Reading, England in 1929. After receiving his PhD from the University of London he emigrated to Canada in 1957 and eventually became Professor of Botany and Curator of the Vascular Plant Herbarium at the University of Alberta in Edmonton. His research area was the study of arctic plants in Alberta's National Parks, Alaska, the Yukon, and the Northwest Territories. He published numerous articles on arctic flora as well as two books, a Flora of Alberta and Vascular Plants of Alberta. Packer died in 2019.

Weakley lists 18 species of *Packera*. Our database includes eight. Those we see most frequently, in addition to *P. aurea,* are Small's Ragwort (*P. anonyma*), Divided-leaf Groundsel (*P. millefolia),* and Roundleaf Ragwort (*P. obovata* which can be seen at Glassy Mountain. Characteristics of these four species are listed in the table.

Other species in our database are Balsam Ragwort (*P. paupercula*), Prairie Ragwort (*P. plattensis*), Schweinitz's Ragwort (*P. schweinitziana*), and Woolly Ragwort (*P. tomentosa*). The last, *Packera tomentosa*, is the only one the club has never recorded. All the Ragworts have bright yellow ray flowers. As early spring bloomers they attract loads of hungry insects, which aid in their pollination. Their fruits are dispersed by pappuses, modified parachutes that facilitate wind dispersal. Their foliage is toxic to mammals and can cause liver damage, probably one reason why they are not browsed by deer and therefore thrive.

Small's Ragwort (*Packera anonyma*), formerly known as *Senecio anonymus* or *Senecio Smallii*, was named by Nathanial Lord Britton after his Ph.D. student, John Kunkel Small, a botanical taxonomist who became the first Curator at the New York Botanical Garden. After *P. aurea*, it's the most common Ragwort that we see – there are several plants happily growing in my neighborhood, but it's much less "weedy" than *P. aurea*, tending to grow in clumps. Its distinguishing characteristics are elongated basal leaves with serrated or scalloped margins

that taper to a long petiole. The leaves become progressively smaller and sessile towards the top of the stem (see Table).

Small's Ragwort (*Packera anonyma*)

As mentioned in the introduction, Golden Ragwort (*Packera aurea*), formerly known as *Senecio aureus*, grows almost everywhere, one reason why many people don't like it. Its distinguishing characteristics are rounded basal leaves with long petioles. The leaves are indented or heart-shaped where they meet the petiole. The underside of the leaves is often a dark purple. The stem leaves are elongated and divided. Its preferred location is damp areas, such as ditches or bogs, but it seems to adapt to almost any location.

Golden Ragwort (*Packera aurea*)

We see Divided-leaf Groundsel (*Packera millefolia*), formerly known as *Senecio millefolium*, a plant that prefers to grow on or near granite rock outcroppings, at Glassy Mountain and Eva Chandler Heritage Preserves. Its leaves are primarily basal. It differs from the other *Packera* species described here by having leaves that are twice or more pinnately divided; thus, the leaflets are very narrow. The specific epithet *millefolia* means “many leaved”.

Divided-leaf Groundsel (*Packera millefolia*)

We also see Roundleaf Ragwort (*Packera obovata*), formerly known as *Senecio obovatus,* on our field trips to Glassy Mountain. The specific epithet *obovata* is from the Latin meaning “inverted egg shape”, referring to the distinctive shape of the basal leaves. Another common name for this plant is “Spoon-leaved Ragwort”, which may be a better description than “Roundleaf”, which I associate more with the shape of *P. aurea* leaves. The flowers on P. obovate are larger than those of our other *Packera* species.

Roundleaf Ragwort (*Packera obovata)*

Packera aurea was used by native Americans and early settlers for many medicinal purposes. It was traditionally used for the treatment of disorders of the female reproductive system, such as menstrual problems, prevention of pregnancy, to hasten delayed childbirth, and relieve the pain of childbirth. It was also used for the treatment of kidney problems, difficulty in urination, heart troubles, lung ailments, and dysentery. However, no clinical trials establishing efficacy have been done. Furthermore, *Packera* species contain toxic alkaloids that cause liver damage, and their use raises serious safety concerns.

Thanks to Ken Borgfeldt, Master Recorder, for providing information on plant observations.

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Characteristics of *Packera* Species Commonly Found in the Southern Appalachians

	Small's Ragwort (*Packera anonyma*)	**Golden Ragwort (*Packera aurea*)**	**Divided-leaf Groundsel (*Packera millefolia)***	**Roundleaf Ragwort (*Packera obovata*)**
Stem height	1.5 – 2.5'	0.5 – 2.5'	1 – 2'	0.75 – 2'
Basal leaves	Toothed or scalloped. Elongated, tapering to a long petiole.	Rounded with long petioles. Indented where it joins the petiole. Underside often purple.	Leaves mostly basal & narrow with multiple dissections.	Obovate, tapering at the base to a long, winged petiole. Spoon-shaped. Underside often purple.
Cauline (stem) leaves	Fewer, smaller, & toothed. Uppermost leaves sessile.	Sessile, elongated.	Similar to basal leaves but gradually becoming smaller and sessile	Fewer, alternate, smaller, becoming sessile at top of stem
Flower heads	Numerous, 20-100, ½" across, in a corymb-like array.	10 - 20, ¾" – 1" across, in a flat-headed corymb.	Numerous, 10-30 in an open corymb.	8 – 16, ¾ - 1" across, in a flat-headed corymb.
Ray flowers	Yellow, 8-15 per head, 0.2-0.3" long	Yellow, 10-12 per head, 0.25-0.5" long	Yellow, 8-10 per head	Yellow, 8-10 per head, 0.2-0.4" long
Disk flowers	Yellow, 0.2-0.3" wide	Yellow, 0.2-0.5" wide	Yellow	Orange-yellow, 0.3-0.6" wide
Preferred location	Common. Meadows, roadsides, woodlands.	Common. Bogs, meadows, wet woods.	Uncommon. On or near granite rock croppings in Southern Appalachians.	Uncommon. Wooded slopes with basic soils.

SHORTIA

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2Q 2022
The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. Membership is open to all. Individual/family memberships are $15/year. Lifetime membership is $150. Send dues to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712

SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB

Shortia galacifolia

Oconee Bells

Fall 2022

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MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see http://www.hendersoncountypublicschoolsnc.org) but NOT necessarily canceled because of the delayed opening.

For any change of address, email or telephone number, please send an email to wcbotanicalclub@gmail.com.

Our webpage is located at http://wcbotanicalclub.org

President's Message

Almost Time to Celebrate !

As I mentioned in the last Shortia, next year is the 50th Anniversary of our club. We have been enjoying the woods and the plants for decades and have contributed to the education and enjoyment of many folks. You also may not know that Ken maintains our club plant database, which contains 100+ field site records, complete with plants found at each site and valuable phenology records (i.e. flowering and fruiting dates on each visit) which is valuable scientific data, especially with climate change effects. The club has also had several Botany Field Guide authors, such as Dick Smith's *Wildflowers of the Southern Mountains* (1998) and more recently, Rosemarie Knoll's *Wildflowers of the Blue Ridge Parkway & Pisgah National Forest*, *Wildflowers and Waterfalls of DuPont State Forest,* and *Wildflowers of the Pisgah Inn*. The Club also maintains a guide to the Buck Springs Nature Trail near Mt. Pisgah (see: https://wcbotanicalclub.org/buck-spring-nature-trail/). There may be other books or scientific papers that I am not aware of.

We are planning an event Celebration for near the original Anniversary date in late March.

Save the Date for Friday, March 24th, 10AM, at Bullington Gardens. Stay tuned!

In the meantime, you may not be aware of all the Club historical information that Penny has scanned and loaded on our website. So, your homework between now and March is to read the information from our club archives.

See the links below, but with the following caveat:

"You may not collect images or text from this site in order to make images or text available on your own website. If you wish to use photographs or any other resource created by us and posted on this site for other uses, it should bear the following credit: "Photographer or Author name, Citation (if relevant), Western Carolina Botanical Club".

The narrative History of the Club and Programs from previous Anniversary Celebrations (20th, 25th, 30th, 40th): https://wcbotanicalclub.org/history-of-the-club/

Complete archive of past Shortia newsletters and an Index to the articles (from 1979 to 2022): https://wcbotanicalclub.org/shortia/

Compilation of articles and a complete index of Dick Smith's Look Again ! articles that appeared in Shortia (1981 to 2014): https://wcbotanicalclub.org/look-again/

We also have old Field trip reports from as far back as the 1980s. Some of these are very interesting. A lot were done in narrative form. Most had plant lists and documented the field sites. The notes were probably hand-typed on an old manual typewriter and some of the plants found are informative. In addition, we might want to revisit some of the old field sites (some that I never heard of). If interested in seeing any of these please let me know.

Joe Standaert

A new WCBC “Official” Gavel!

Joe Standaert

A Covid project for me was learning to use my wood lathe and turn a lot of bowls, a rolling pin, candlesticks etc. So, one day I was inspired to turn a new Club Gavel out of some Black Walnut I received from a friend’s yard, courtesy of tree trimming by Duke Power. See below for the old and new gavels. If anyone knows the history of the gnarly laurel gavel, please let me know. I somehow suspect Alan Graham?

Old Gnarly Laurel Gavel

New Black Walnut Gavel

Winter Bullington Indoor Meetings

For the past couple of years we have not done our weekly indoor winter meetings due to Covid and lack of a scheduler. Also, when the Board developed this summer's outdoor schedule, we stopped at the end of October and left the indoor meetings "to be determined".

In a moment of weakness, my wife Mary has agreed to be the indoor scheduler. Our goal is to meet in November and December and then hold twice monthly meetings in January, February, and March. They will all be held at Bullington Gardens. The January and February meetings will be on the second and fourth Fridays from 10 AM to 12 PM. with Coffee, Cookies and Conversation Time.

Here is the *draft* schedule:

Friday, Nov, 4th, 10-12 AM - The first Friday of November
"Tree ID Course" by Carrie Blair

Friday, Dec, 9th, 11:15AM - 2:00PM
Holiday Fest and Potluck Lunch

Friday Jan, 13th, 10-12 AM
"Beyond Beauty" by Cindy Carpenter

Friday Jan, 27th 10-12 AM
"Newfoundland" by Jim Poling

Friday Feb, 10th 10-12 AM
"Yellowstone Revisited" by Bonnie Arbuckle

Friday Feb, 24th 10-12 AM
To Be Determined

Friday Mar, 10th 10-12 AM
"Spring Wildflower Preview" by Penny Longhurst

Friday Mar, 24th, 10AM
WCBC 50TH ANNIVERSARY CELEBRATION

What's in a Name – *Trillidium undulatum*

Penny Longhurst

Are you ready for this? It seems likely that in the future we may be walking the Painted Trillidium Trail each spring. Yes, one of my favorite plants will probably be bumped from the Trillium genus! For the time being ITIS, the Integrated Taxonomic Information System that WCBC uses for botanical names, has not changed the species name from *Trillium undulatum*, nor has the Flora of North America (eflora.org). However, it's probably only a matter of time before our plant lists will show "*Trillidium undulatum,* Ex: Trillium undulatum"!

Historically the *Trillidium* genus had only one member, the Himalayan Trillium (*Trillidium govanianum*), a plant that grows at elevations above 8,000 feet in the Himalayan mountains. However, it should be noted that many online sources refer to it as *Trillium govanianum*. The plant has six-inch-high purple-red stems supporting its three leaves. The flower is much smaller than that of Painted Trillium and can not easily be seen in photographs. The sepals and petals are very narrow and described as being a deep red/purple/green color, giving the appearance of a plant with six skinny petals. The anthers are yellow, and the style is red. Like the Painted Trillium plant the leaves are petiolate and the fruit is a red berry.

(c) Elizabeth Byers. iNaturalistUK.
https://uk.inaturalist.org/photos/90760162

(c) Basu Dev Neupane. iNaturalistUK.
https://uk.inaturalist.org/observations/119686293

A multi-purpose plant, *Trillidium govanianum* has been described as a magical herbal plant, traditionally used to treat dysentery, wounds, skin boils, inflammation, sepsis, menstrual and sexual disorders and as an anti-cancer and anti-ageing agent. However, I could find no clinical studies evaluating its efficacy. Nonetheless, because of its popularity in folk medicine, like Ginseng, it is subject to poaching. One kilogram of its root can fetch $1,000 US on the black market, providing a huge incentive for smuggling and resulting in plant loss in the wild.

Painted Trillium plants exhibit several key differences compared to the other pedicellate Trillium species that we are familiar with here in the Southern Appalachians. This was noted by Gates who wrote in 1917 that "This species is somewhat isolated from its nearest relatives by a number of peculiarities". These included:

- The leaves were ovate, rounded at the base, and had a petiole.
- The petals were oblong or oval, much longer than the sepals, white striped with purple, and with wavy margins.
- The anthers (pollen-bearing portion of the stamen) were short, a similar length to the filaments, and shorter than the stigma (the part of the pistil that is receptive to pollen). In other Trillium the stigma is usually longer than the anthers.
- The berry was red.

You have probably noticed that the size and shape of Painted Trillium petals can vary greatly. Some have petals that are almost as large as those of *Trillium simile*, while others are quite narrow, like the plant in the center photograph below. However, the petals are never as skinny as those of *Trillidium govanianum.*

In their proposal for the nomenclature change from *Trillium undulatum* to *Trillidium undulatum*, Floden and Schilling made the following points to support their case:

- Like *Trillidium govanianum,* Painted Trillium leaves have petioles, while all other Trillium have sessile leaves.
- Like *Trillidium govanianum,* Painted Trillium fruit is un-ridged and distinctly berry-like, unlike the ridged fruits of all the other Trillium species.
- Genetic studies have shown that Painted Trillium is more closely related to *Trillidium govanianum* than to other Trillium species.
- The pollen of the two species has similar surface morphology.

Weakley has already made the change in his new Flora of the Southeastern United States, as has Janie Marlow on namethatplant.net. So, it's probably only a matter of time until we must ask the Master Recorder to modify the database and plant lists. Fortunately, the new name will be pretty close to the old name. I think we can handle it!

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Symphyotrichum

Lucy Prim

Last year I did a Shortia article about three Asters with heart shaped leaves. That article has helped me enormously when it comes to Asters with that sort of leaf. This year I will do an article about four Asters whose species' name starts with the letter "P". A scornful Shortia reader may ask if that is a good way to categorize Asters, and I must say it is only good in that it allows me with my declining mental abilities to remember that there are four commonly found Asters in our area that all start with the letter "P". That is not too hard to do!

With identifying the first three Asters, it is important to focus on the leaves and how they attach to the stems.

S. prenanthoides (Crooked Stem Aster) has mid-stem leaves which have a long petiole which clasps the stem and then flares out as shown in the drawing. The upper section of the stem is either slightly or strongly zigzagged.

S. puniceum var puniceum (Purple Stem Aster) is a tall robust Aster, with a deep purple and hairy stem. The leaves are clasping, but only half way around the stem which makes it easy to distinguish from *S. patens*.

S. patens var patens has clasping leaves, and a purple hairy stem, but the leaves are much more clasping than with *puniceum*, reaching all the way around the stem and sometimes overlapping, and they are ciliated and not toothed.

S. pilosum is an Aster with a multitude of tiny white flowers, and the stem is usually very hairy.

The more I study Asters and try to learn their names, the more they delight me, and I see that by dividing them up into little groups I can learn their names and not feel so defeated by them. What charming, airy little flowers they are! Now instead of walking past them feeling overwhelmed, I can identify most of the ones I see. Of course, there are others that aren't as common, and some that are common which I haven't yet described, those that don't start with "P" and don't have heart shaped leaves. Maybe I will tackle them next year!

Symphyotrichum

prenanthoides
Crooked Stem Aster

puniceum var puniceum
Purple Stem Aster

pilosum var pilosum
White Heath Aster

patens var patens
Late Purple Aster

Box Elder; Ashleaf Maple (*Acer negundo*)

Recorded Locations: FENCE, Jackson Park, Kellogg Center, Oklawaha Greenway, Park at Flat Rock

Plants We Love to Hate – Horseweed

Penny Longhurst

This spring a solitary mystery plant popped up under my deck. It was skinny with what looked like narrow whorled leaves. It looked familiar, but I couldn't remember what it was. It grew and grew and grew. Like we all do, I decided to leave it until it bloomed. Maybe then I'd recognize it and decide what to do with it before it became too late! Then, in early August we walked the Fawn Lake Loop as a field trip, and I saw the plant! It was Horseweed (*Conyza canadensis*). I wanted to rip my plant out right away, but my husband had grown fond of it and insisted we leave it so he could see the flowers. However, I was anxious to exterminate it before it went to seed, and a few weeks ago I couldn't wait any longer. It is gone. He hasn't said anything yet.

Horseweed (*Conyza canadensis*) is a native weedy annual that is commonly found throughout North America . Its taxonomy has been complicated. Originally named *Erigeron canadensis* by Linnaeus, it seems to have been bouncing back and forth between the genera *Erigeron* and *Conyza* ever since! Although ITIS currently identifies Horseweed as *Conyza canadensis*, Radford lists it as *Erigeron* as does Weakley.

Over 150 *Conyza* species exist worldwide. Weakley includes three former *Conyza* species that may be found in the NC mountains: South American Horseweed (*Erigeron bonariensis*) [non-native, rare in the mountains], Horseweed (*Erigeron canadensis*) [native, common in the mountains], and Southern Horseweed (*Erigeron pusillus*) [native, common in the mountains]. ITIS considers *Erigeron pusillus* to be a synonym for *Conyza canadensis*, but only time will tell! The only *Conzya* species listed in our database is *Conyza canadensis* (Weakley's *Erigeron canadensis*).

The genus name *Conzya* is derived from the Greek for "Flea". Plants such as *Conyza* and *Erigeron* species, have an odor that supposedly repels fleas and are often known by the common name "Fleabane". Native Americans used *Conyza canadensis* for medicinal purposes and ate the young leaves and shoots. Most of the internet resources on medicinal uses of Horseweed repeat the exact same unverified information, so are not useful. They also often refer to other *Erigeron* species as Horseweed. One article talked about *Erigeron canadensis* but the photographs were of *Erigeron annuus*. Another magical plant, *Conyza canadensis* has been recommended to treat disorders of the bladder, gastrointestinal tract, such as diarrhea, dysentery, and ulcerative colitis, and respiratory tract, hemorrhage, bleeding hemorrhoids, sexually transmitted diseases, and many other conditions. It also has anti-inflammatory and antioxidant actions.

Horseweed (*Conyza canadensis*)

All sources agree that the main toxicity associated with Conyza is contact dermatitis from handling the plant. I was unable to find the derivation of the common name “Horseweed”, but the plant contains chemicals that can irritate the nostrils of horses. Apparently, livestock generally avoid eating Horseweed because it has a bitter taste.

The stem of *Conyza canadensis* is hairy and may reach 5-to-6 feet tall. The plant generally does not branch except at the inflorescence where it forms a panicle. It lacks basal leaves but has numerous alternate stem leaves, giving a whorled appearance. The leaves are narrow and sessile. The numerous flower heads are small with white ray flowers, mostly concealed by the bracts. Seed dispersal in Horseweeds is like that of Thistles or Dandelions. The pappus or tuft of hairs attached to the seeds assists in wind dispersal. Under ideal conditions it can reproduce aggressively and is considered a noxious weed. I’m glad I nipped that in the bud!

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Western Carolina Botanical Club – Annual Meeting Minutes – July 8, 2022

Welcome and Introduction:

President Joe Standaert called the meeting to order and welcomed all members.

He thanked all members of the Board and all the Leaders, Co-Leaders, Recorders, photographers, and scouters for our walks.

He said a special thank you to Penny who has done our website, virtual photo walks, served as interim Treasurer, Interim Secretary, Shortia article author and interim scheduler.

He said another special thank you to Ken for being our faithful recorder, walk notification emailer, photographer, and Shortia editor. And he thanked all other Shortia contributors, including Penny, Lucy, and others.

Finally, he thanked John and Daudie Colson for helping the Club find Monotropa odorata in Devil's Fork State Park.

Joe noted that we had a special memorial scattering of Susan Sunflower's ashes at "Wolfie" recently. Joe asked for a moment of silence for Susan and all of our members who passed over the past year.

Election of Officers:

The following officers were elected by electronic vote.

Treasurer – Harriet Walls
Secretary – Aleta Tisdale
Members at Large – Charlie Brice

Joe thanked the board members for their help during the past year, especially Penny as interim Treasurer and Interim Secretary. He also mentioned appreciation for Susan Sunflower who served as Secretary until she had to step down due to health concerns.

Special Awards & Presentations

Joe presented an honorary lifetime membership award to Juanita and Larason Lambert. He also mentioned that Bonnie Arbuckle received this honorary lifetime award in 2015.

Old Business:

Joe asked the Secretary to summarize the minutes from the last annual meeting. Aleta Tisdale, Secretary, then read a summary of the 2021 minutes. A motion was made to approve and it was seconded. Members then voted to approve the minutes from last year's annual meeting.

Joe then asked only the Board Members to approve the minutes of the May 31, 2022 Board meeting which they did.

President's Report – Joe gave his report as follows:

The board held 2 meetings this year. Here are the highlights.

Dec 2, 2021:

- Susan Sunflower resigned due to health, Penny agreed to be interim
- We need scheduler and replacement for Treasurer and Secretary
- Board reports
- Discussed Buck Spring Nature Trail brochures
- Canceled 2021 Holiday Fest and Indoor schedule
- Discussed March-July Schedule - use Spring 2020 canceled sched as starting point
- Scheduled a spring Jocassee boat ride

May 31, 2022:

- Susan Sunflower memorial service was held on June 2
- Board reports
- $800 to Bullington
- Honorary Life membership – Lamberts
- Discussed future of Shortia, lack of article writers
- Approved nominees: Harriet, Aleta, Charlie
- Discussed 50th Anniversary, March 2023
- Schedule developed for July-Dec 2022, except indoor mtgs TBD

- This year we have 110 members, of which 12 are new members.
- We donated funds to the Bullington Gardens
- Asked for a Committee for the 2023 50th Anniversary event(s)-
  - Diane Bauknight, Carrie?, Others? – Committee to be determined.

Joe requested the officers and committee chairs give their reports:

Treasurer – Harriet read Penny's report from the past year as Penny was absent.
Master Recorder – Ken Borgfeldt gave his report of the duties of the master recorder.
Bullington Gardens – Juanita Lambert gave her report.

Shortia Editor – Ken Borgfeldt and Joe spoke about the history of Shortia and the future plans. They asked for submissions of various types from a wider cross-section of the membership.
Scheduler – Joe mentioned that we are still looking for an official Scheduler but for now the Board is handling it..
Webmaster - Joe read Penny's report.

Final Announcements:

- Joe announced the plant exchange.
- Joe said the book exchange is no longer happening.
- Joe announced that the new schedule begins July 15, 2022.
- Joe invited members to lunch followed by a walk.

Joe called to adjourn the annual meeting.

SHORTIA

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Editor: Ken Borgfeldt

3Q 2022

The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. Membership is open to all. Individual/family memberships are $15/year. Lifetime membership is $150. Send completed membership form and dues to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712

SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB

Shortia galacifolia

Oconee Bells

Winter 2022

Board of Directors

President	Joe Standaert
Vice-President	Cindy Carpenter
Secretary	Aleta Tisdale
Treasurer	Harriet Walls
Members at Large	Charlie Brice & Martha Rollefson

MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see http://www.hendersoncountypublicschoolsnc.org) but NOT necessarily canceled because of the delayed opening.

For any change of address, email or telephone number, please send an email to wcbotanicalclub@gmail.com.

Our webpage is located at http://wcbotanicalclub.org

REMINDER: Don't forget it's dues time. Make $15 check payable to Western Carolina Botanical Club and mail to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712.

President's Message

Joe Standaert

This edition of the President's Message will be, quite literally, a Presidential Report !

As you know, the year 2023 will be the Western Carolina Botanical Club's 50th Anniversary, so I thought I would document the list of Past Presidents. Later in this *Shortia* I have also included a brief history of the club.

We will be having a celebration of this anniversary on Friday, March 24th, 10AM, at Bullington Gardens.

Enjoy this "blast from the past"!
Joe Standaert

1973	**Joe Schatz, acting**	**1998**	**Don Herrman**
1974	**Lincoln Highton**	**1999**	**Anne Ulinski**
1975	**Lincoln Highton**	**2000**	**Anne Ulinski**
1976	**Harvey Krouse**	**2001**	**Bonnie Arbuckle**
1977	**Harvey Krouse**	**2002**	**Bonnie Arbuckle**
1978	**Harvey Krouse**	**2003**	**Jeanne Smith**
1979	**Bruce Leech**	**2004**	**Bonnie Arbuckle**
1980	**Bruce Leech**	**2005**	**Larason Lambert**
1981	**August Kehr**	**2006**	**Jenny Lellinger**
1982	**August Kehr**	**2007**	**Jenny Lellinger**
1983	**Dick Smith**	**2008**	**Juanita Lambert**
1984	**Dick Smith**	**2009**	**Juanita Lambert**
1985	**Elton Hansens**	**2010**	**Helen Smith**
1986	**Elton Hansens**	**2011**	**Helen Smith**
1987	**Millie Blaha**	**2012**	**Mary Kathyrn Hardman**
1988	**Bill Verduin**	**2013**	**Helen Smith**
1989	**Bill Verduin**	**2014**	**Juanita Lambert**
1990	**Bill Verduin**	**2015**	**Penny Longhurst**
1991	**Bessie Sinish**	**2016**	**Penny Longhurst**
1992	**Bessie Sinish**	**2017**	**Susan Sunflower**
1993	**Dorothy Rathmann**	**2018**	**Susan Sunflower**
1994	**Dorothy Rathmann/Don Herrman**	**2019**	**Gayle Mercurio**
1995	**Don Herrman**	**2020**	**Gayle Mercurio**
1996	**Don Herrman**	**2021**	**Joe Standaert**
1997	**Don Herrman**	**2022**	**Joe Standaert**

Winter Bullington Indoor Meetings

NOTE: In case you missed it in the last edition of Shortia, here is a reminder of the upcoming Indoor Meeting Schedule:

For the past couple of years we have not done our weekly indoor winter meetings due to Covid and lack of a scheduler. Also, when the Board developed this summer's outdoor schedule, we stopped at the end of October and left the indoor meetings "to be determined".

In a moment of weakness, Mary Standaert agreed to be the indoor scheduler. Our goal is to hold twice monthly meetings in January, February, and March. They will all be held at Bullington Gardens. The January and February meetings will be on the second and fourth Fridays from 10 AM to 12 PM. with Coffee, Cookies and Conversation Time.

Here is the current schedule:

Friday Jan, 13th, 10-12 AM
"Beyond Beauty" by Cindy Carpenter

Friday Jan, 27th 10-12 AM
"Newfoundland" by Jim Poling

Friday Feb, 10th 10-12 AM
"Yellowstone Revisited" by Bonnie Arbuckle

Friday Feb, 24th 10-12 AM
"Toxic Plants" by Dr. Greg Juckett

Friday Mar, 10th 10-12 AM
"Spring Wildflower Preview" by Penny Longhurst

Friday Mar, 24th, 10AM
WCBC 50TH ANNIVERSARY CELEBRATION

Introducing our first program of 2023

Cindy Carpenter

On a sunny spring day in 1913 a woman bends over a cluster of small woody plants on a stream bank. Her children play nearby. Prodding the soft soil beneath her long skirt with a digging stick, she pulls a yellowroot plant from the bank, its familiar earthy fragrance a comfort. With this bright bitter root, wild cherry bark and sassafras root gathered earlier she will make a tonic for herself, her family, and any neighbors unable to make it themselves. For generations before her, Cherokee women may have dug earlier generations of the same yellowroot plant, seeking ingredients for spring blood builders.

These musings enrich rambles in fields and forests for those of us in a society largely removed from culturally acquired knowledge and reliance on woods wisdom. Wildflowers, shrubs and trees we encounter today were sought for medicine, food and dyes by previous cultures. A century ago some were included in patented formulas and listed in the United States Pharmacopoeia. Join Cindy Carpenter on January 13th for our first program of 2023, *Beyond Beauty*, and explore the historical uses of local plants we seek and enjoy on our walks.

We Closed 2022 with our Holiday Fest

We enjoyed a video presentation following our luncheon. Here is a link to the video.

https://youtu.be/CungmglKdnk

WCBC 50th ANNIVERSARY IN 2023 !

Our History (from our website)

The inspiration for the Western Carolina Botanical Club's formation can be traced to a series of wildflower classes taught in Brevard during the fall of 1972 by Dr. C. Ritchie Bell, then Professor of Botany at UNC-Chapel Hill and Director of the N. C. Botanical Gardens. The enthusiasm generated by this experience prompted one participant, Harry Logan, to suggest "I think it would be nice for some of us who've gotten to know each other in these classes to get together regularly and go out to various interesting places to look at flowers and other plants"–and another, Barbara Hallowell, to agree wholeheartedly. (Several decades later, this simple. direct statement of the Club's essential purpose still serves it very well)!

Harry aired the proposal at a meeting on March 12, 1973 which was attended by Joe Schatz, Harvey Krouse, Lincoln Highton, Harriet Corwin, Pat and Gordon Tooley, Peggy Camenzind, Nan Morrow, and possibly others. This led to an organizational meeting on March 27, 1973 at which the following officers were elected:

President Lincoln Highton

Vice President Gordon Tooley

Secretary-Treasurer Barbara Hallowell

The aims of the Club were articulated as follows;

- For the study, enjoyment and appreciation of the plants of Western North Carolina in their natural environment.
- For the collection and compilation of information and data on the plants of Western North Carolina and the dissemination of this to other interested persons.
- For the education of interested persons in the enjoyment and appreciation of wildflowers and other plants.
-

Other basic decisions made at this meeting–activities to consist mostly of field trips, indoor programs in bad weather, a single formal meeting each year, modest dues structure, etc.–remain unchanged today.

Scrapbooks depicting the history of the Club and community service reports, as well as hard copies of Shortia may be viewed in the Rowell Bosse North Carolina Room on the second floor of the Transylvania County Library at 212 South Gaston Street, Brevard, North Carolina 28712

A Squirrel and a Memory Aid

Lucy Prim

We have a little red squirrel that lives in our high elevation forests, Tamiasciurus hudsonicus. It is a pine squirrel, and is known as the Boomer here in the mountains because it makes a chattering barking sound. Another name is the Chickaree. It eats many different things, but one of its primary sources of nourishment, one that is crucial for winter survival, is the seeds from conifer cones, and in our region that would mean our high elevation conifers: Picea rubens, Abies fraseri and Tsuga .

For our Holiday Fest this year Mary Standaert gave us a fun challenge: “Think of a plant identification Memory Aid and present it at the party!” My memory aid involves this red squirrel. If you conjure up an image of patting the little red squirrel, and then think of the word “PAT” it will give you the first letter of the three evergreen conifers that live in our high elevations—Picea, Abies, and Tsuga—**P A T**!

Botanical Mnemonics

Mary Standaert

Opposite Branching Woody Plants

MAD CAP Bucking Horses with Red Dawn Fringe

Maple, Ash, Dogwood, Honeysuckle Family, Buckeyes, Horse Chestnut, Dawn Redwood, Fringe tree, also Mock Orange (Philadelphus). Carrie Blair

—----------

Pioneer Plants Poem

Black Locust, Black Cherry, Black Birch, Blackberry. Carrie Blair

—----------

Quercus coccinea, Scarlet Oak

Scarlet “O” Hara has a tiny waist and a long petticoat (petiole). Mary Standaert & Lucy Prim

—----------

Pinus rigida, Pitch Pine (3 needles in a bundle)

Three pitches and you’re out. Mary Standaert

—----------

Magnolia macrophylla, Elephant / Bigleaf Magnolia &

Magnolia fraseri, Fraser Magnolia

The two magnolias whose leaves have “ears.” Mary

(Send in Mnemonics for future editions of Shortia to Mary Standaert <mjmontreat@charter.net>)

What's in a Name – Part 1 – Common Names

Joe Standaert

When we are on our walks, there are always very interesting discussions about plant names, both scientific and common. I will discuss scientific names and the various plant nomenclature databases in a later article. Suffice it to say, we used to think common names were very variable, but scientific names were fairly static, but that is not the case anymore with all the new genetic studies!

For this discussion of common names, it has always been the case that plant names varied by geographical region, time period, and the whim of authors! The names usually are based on some characteristic of the plant or the "doctrine of signatures" or maybe even the medicinal uses. Our club uses the ITIS database as our standard for accepted scientific names. ITIS is the Integrated Taxonomic Information System, found at https://www.itis.gov/ However, ITIS does not specify a single "accepted" common name, but rather lists a myriad of common names in use. Our club maintains the common names originally from club member Dick Smith's *Wildflowers of the Southern Mountains* and any subsequent name changes as they come up.

Now for the fun part! Mary and I have a collection of old vintage field guides and wildflower books, dating back to the "first" field guide by Mrs. William Starr Dana in 1904 (*How to Know the Wildflowers).* In these vintage books, it is very interesting to see the various common names in use, some of which I find preferable than the current names. For example, Mary and I love to call Gillenia trifoliata "Fawn's Breath" rather than Bowman's Root! Another one I like is to call Liparis liliifolia a "Mauve Sleekwort" instead of a Brown Widelip Orchid.

I have listed below some selected name variations for your reading pleasure. These are all from *Wildflowers Worth Knowing*, Little Nature Library, by Neltje Blanchan from 1923. The scientific names are from 1923, also ! It would be fun to see where some of these names came from!

Arisaema triphyllum: Jack-in-the-Pulpit; Indian Turnip
Clematis virginiana: Virgin's Bower, Traveller's Joy, Old Man's Beard
Cypripedium pubescens: Yellow Moccasin Flower; Whippoorwill's Shoe
Dicentra cucullaria: Dutchman's Breeches, White Hearts, Soldier's Cap, Ear-drops
Hepatica triloba: Liver-leaf, Hepatica, Liverwort, Squirrel Cup
Phytolacca decandra: Pokeweed, Scoke, Pigeon-berry, Ink-berry, Garget
Podophyllum peltatum: May Apple, Hog Apple, Mandrake, Wild Lemon
Polygonatum biflorum: Hairy or True or Twin-flowered Solomon's Seal
Ranunculus acris: Meadow Buttercup, Tall Crowfoot, Kingcups, Cuckoo Flower, Goldcups, Butter-flowers, Blister-flowers
Sanguinaria canadensis: Bloodroot, Indian Paint, Red Puccoon
Saponaria officinalis: Soapwort, Bouncing Bet, Hedge Pink, Bruisewort, Old Maid's Pink, Fuller's Herb
Sisyrinchium angustifolium: Pointed Blue-eyed Grass, Eye-bright, Blue Star
Smilacina racemosa: (Maianthemum racemosum) Wild Spikenard, Solomon's Zig-zag
Tiarella cordifolia: Foam-flower, False Miterwort, Coolwort, Nancy-over-the-Ground
Trillium erectum: Purple Trillium, Ill-scented Wake-Robin, Birth-root
Veratrum viride: American White Hellebore, Indian Poke, Itch-weed **And, a lot more**

Plants We Love to Hate – Bidens

Penny Longhurst

Like Thistles, you could say that Bidens are unappreciated plants. In fact, some Bidens could probably compete with Joe's favorite "World's Ugliest Rare Flower", Rugel's Plantain (*Rugelia nudicaulis*), except that most of them are not particularly rare! However, in my opinion, a patch of *Bidens aristosa* or *polylepis* in bloom can compete with some of the best wildflower shows around.

The genus Bidens, published by Carl Linnaeus in 1753, is derived from the Latin *bi* for "two", and *dens* for "tooth", meaning "two-toothed", referring to the bristles or awls on the achene fruits which, as we well know, are definitely "sticktights". The common name, Beggarticks, refers to their habit of hitching a ride upon just about anything that moves. Bidens are commonly found in wet areas, such as ditches. Hence, another common name is Ditch Daisy.

In this part of the country Bidens are annuals. However, in other areas where winter temperatures don't fall below 40ºF, or if they grow in protected areas, they may be perennial.

Weakley lists 15 native Bidens species potentially found in North Carolina. Of those, 8 are listed in our database. However, only 3 Bidens species, *B. aristosa, B. bipinnata,* and *B. frondosa,* have been identified on our field trips, possibly because we don't pay much attention to Bidens unless they are blooming. Some of the other species have rarely (or never) been found in the counties the club visits, are not included in Dick Smith's book, and could probably be safely removed from the database.

Bidens aristosa (Bearded Beggarticks, Long-bracted Beggar-ticks, Tickseed Sunflower) is reported to be uncommon in the mountains but common to abundant in the Piedmont. The specific epithet a*ristosa* is derived from the Greek meaning "heavily bearded" or "awned". A tall plant with petiolate divided leaves and sunflower-like flowers, it looks like *B. polylepis*, except that it has fewer and shorter bracts and they are not twisted. The achene is flat with 2 barbed awls.

The club has recorded it at Jackson Park and on the Butter Gap Trail, but not since 2003, probably because we typically don't hike there in late summer or fall. A plant in fruit was identified on the Shut-in-Trail in 2019. I "think I" saw *B.* aristosa at Hanging Rock State Park in Stokes County, NC. The bracts are clearly different to those of *B polylepis* shown below and look very similar to the pictures on NamethatPlant.com. See what you think.

Bidens aristosa blooms and leaves

Bidens aristosa bracts

The Club has seen *Bidens bipinnata* (Spanish Needles) at numerous locations along the Blue Ridge Parkway as well as at the Park at Flat Rock. The specific epithet *bipinnata* is derived from the Latin *bi* for "two" and *pinnata* for "feathered or winged" referring to the leaves which are twice divided or bipinnate. The leaves are petiolate, the lobes have blunt teeth or smooth edges, and superficially they appear fern-like. *Bidens bipinnata* has a small flower head about ½" across, with tiny yellow ray petals surrounding the disc florets. The achene is distinctive and needle-like with 2-4 barbed awls, hence its common name.

Bidens bipinnata blooms & leaves

Bidens bipinnata fruit.

The Club has seen *Bidens frondosa* (Beggar Ticks; Sticktights) at Ashmore, Bad Creek, Frying Pan, and the Park at Flat Rock. The specific epithet *frondosa* is derived from the Latin for "very leafy". The leaf is petiolate, and the blade is pinnate, divided into separate sharply toothed leaflets. The stem is often purplish in color. The flower head is rather unattractive with disk florets only and no ray petals. Distinctive features are the large hairy-edged leaf-like bracts surrounding the flower head. The achene is flat and dark brown with 2 barbed awls.

Bidens frondosa leaves

Bidens frondosa blooms & bracts

Although not listed in the database yet, *Bidens polylepis* (Ditch Daisy, Bearded Beggarticks, Midwestern Tickseed-sunflower, Tickseed Sunflower) was included in Ken's website post "Native Flora of Henderson County Walkways – August & September, 2020 – Part 1". In addition, this year I saw several spectacular patches of it growing along Buck Forest Road in DuPont State Recreational Forest, between the Visitor Center and the start of the High Falls/Triple Falls loop trail. Next August I recommend that you take a short hike up the road and check them out.

From a distance, you might not at first recognize this plant as being a Bidens. Unlike *B. bipinnata,* and *B. frondosa*, it has large bright yellow flowerheads, like a Sunflower or Coreopsis. In recognition of this, several of the common names for *B. polylepis* include the word "Sunflower". *Bidens polylepis* is a tall plant that may reach 5 feet in height. The leaves are petiolate and pinnate with toothed margins, but the leaflets are narrower than those of *B. frondosa*. The flower heads have several large yellow ray petals surrounding yellow disc florets. The specific epithet *polylepis* is derived from the Greek words *poly* for "many" and *letis* for "layers" referring to the numerous distinctive skinny, hairy, and twisted bracts surrounding the flower heads. Awns are usually tiny or absent. The achene clings to fur or clothing by virtue of its rough surface.

Bidens polylepis leaves

Bidens polylepis blooms

Bidens polylepis bracts

Bidens cernua (Nodding Bur Marigold) has been collected in Buncombe, Haywood, and Henderson counties, NC, according to the Vascular Plants of North Carolina website. It's a tall plant with sessile or clasping

lance-shaped leaves. It has 6-8 ray petals and a large center disc. The flower heads tend to droop with age, hence its common name. Similarly, the specific epithet *cernua* means “drooping” or “facing downwards”. The achene has 2 or 4 barbed awls.

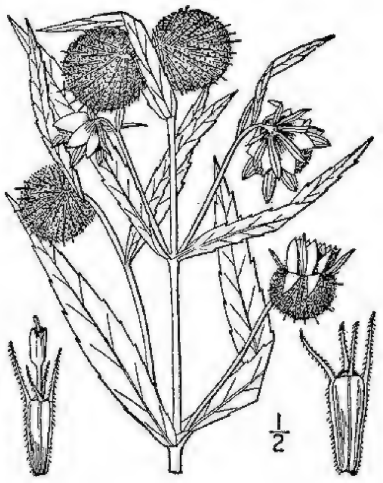
Weakley says that *Bidens connata (*Purple-stemmed Beggarticks) is common in the mountains and has been collected locally in Buncombe, Henderson, and Madison counties. It has also been seen in Cherokee county, which is where I saw it growing along the Tellico River on the NC/Tennessee border. Sadly, I was in a hurry and did not stop long enough to get more than these two pictures. However, they are clear enough to show that the flower heads are different from the Bidens species we usually see.

The specific epithet *connata* means “united or joined” referring to the plant having opposite leaves with petioles which are sometimes winged. The leaves are usually simple and toothed. The flowers lack petals. The disc florets are usually 5-sided with dark colored anthers which are longer than the florets. Each flower head is surrounded by 3-8 leafy bracts. The achene is flattened and bears up to 4 awls.

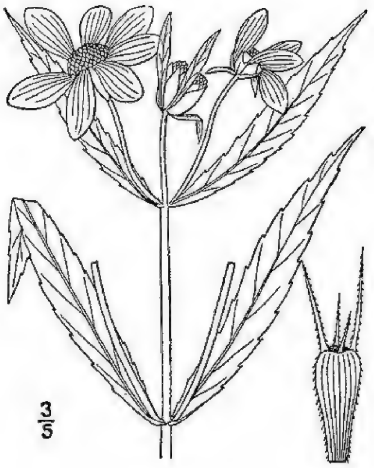
Bidens connata

Bidens connata

Bidens laevis (Smooth Beggartick) is probably not found in the NC mountains. It resembles *B. cernua* but has larger ray petals and the scales or chaff at the base of the disc flowers are orange-red, while those of *B. cernua* are yellow. The specific epithet *laevis* is derived from the Latin for “smooth” referring to the smooth surface of its leaves.



Bidens cernua

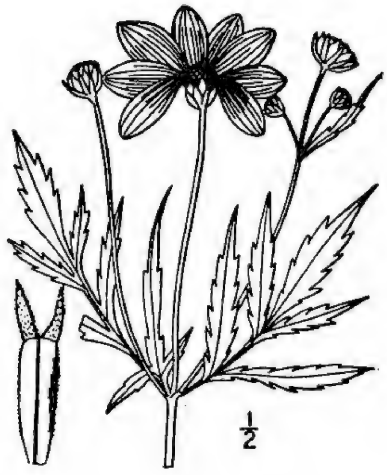


Bidens laevis

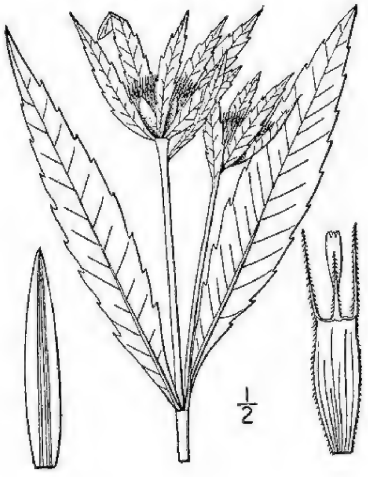
Bidens trichosperma (Tickseed Sunflower) is not found in the NC mountains. Weakley reports that it is present but rare in the Tennessee mountains. The specific epithet *trichosperma* means “hairy-seeded”.

Bidens tripartita (Beggar Ticks) (ITIS synonym: *B. comosa*) has been collected in Henderson, Haywood, and Macon counties, NC. Like *B. frondosa* it has only disc florets surrounded by leafy bracts. The leaves are often sessile or winged and may be simple or lobed. The specific epithet *tripartita* means “three-parted”, referring to the achene which usually has 3 awns.

Bidens vulgata (Tall Beggar Ticks) is uncommon in the NC mountains, but has been collected in Haywood, Jackson, and Macon counties. The specific epithet *vulgata* means “common. Like *B. frondosa* it has only disc florets surrounded by leafy bracts. However, the heads are larger and contain more florets and a greater number of bracts. The plant has petiolate divided leaves.



Bidens trichosperma



Bidens tripartita

Bidens vulgata

Line drawings taken from Britton and Brown, 1913.

Two non-native Bidens species, *Bidens alba* (Hairy Beggarticks, Shepherd's Needles, White Beggarticks) and *Bidens pilosa* (Hairy Beggarticks), have white ray petals and should be easy to identify if we spot them in bloom. Fortunately, both are rare in the mountains.

Thanks to Ken Borgfeldt, Master Recorder, for providing information on plant observations.

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High Elevation Conifers

Lucy Prim

A few weeks ago, somebody told me some very exciting news—a Fraser Fir cut from right off the Parkway near Black Balsam, had been chosen to be the White House Christmas tree for this year. Exciting news! But as often happens with news, this story was not quite correct. The tree was not a Fraser Fir, it was a Red Spruce. And it was not for the White House, it was for the Capitol Building lawn. Oh well, that's still exciting news, and considering how similar those two trees look, (and the two destinations too for that matter, both being big historical white painted buildings in DC) no wonder this person got confused!

When we go walking up at Bear Pen Gap and Mount Hardy and other places in the high elevations, we see three evergreen conifers, and sometimes they are close together, growing in the same place. It can be confusing at first to tell them apart and to be sure we aren't missing something. But knowing there are only three possibilities helps, and knowing a few little identification features makes it easy to decide which tree it is.

An easy way to identify *Picea rubens*, Red Spruce, is to push down on the needles and see if they poke sharply into your finger. If so, then you know it is a Red Spruce. It has distinctive looking needles too, curving up stoutly from the stem rather than sticking out horizontally.

A tree that looks similar to it is Fraser Fir, *Abies fraseri*, a southern Appalachian endemic. We see Fraser Fir and Red Spruce quite close together when we go to Bear Pen Gap. From the parking area we can compare the two trees and see how they differ in appearance from a distance. But we don't always see these trees from a distance. When we pass one on a path, simply reaching out and feeling the needles is a good way to make a confident identification. Fraser Fir needles do not have a sharp point and they won't poke into your finger.

There is one more tree that can look similar to these and it is the Hemlock. This can be a confusing tree to identify when at high elevations because you have to think about other things it might be. Take off a needle and look at it. The Hemlock needle is blunt like the Fraser Fir, but there is one difference. When you pull off one of the needles, the Hemlock needle has a little "stalk" sticking to the needle. How to remember? Here is a "rhyme" (loosely speaking) to be a memory aid—"Hemlock has a stalk". What if there is no stalk? Then it is probably a Fraser Fir.

This is easy! Three trees and three easy ways to remember—except for one little complication. We have two Hemlocks. On our walks we usually see Eastern Hemlock, *Tsuga canadensis*, but there is another one, a very pretty one, *Tsuga caroliniana*, Carolina Hemlock, which looks different because the needles seem to grow around the stem in a delightful fluffy fashion, giving a cylindrical look to the branch rather than a flatter horizontal look.

When we are walking in the high elevations up by the Parkway, we can encounter these three evergreen conifers, sometimes growing close beside each other. It can be confusing. Here is a chart to help us not be confused!

Four Conifers of our North Carolina Mountains

High Elevation Rock Outcrop (>3,000 ft)

Spruce and Fir Forest (>4,500 ft)

Picea rubens	*Abies fraseri*	*Tsuga canadensis caroliniana*
Round and Spikey	Flat and fragrant	8–13 mm, 10–18 mm Hemlock has a stalk
Red Spruce	Fraser Fir	Hemlock

Lucy Prine

Fraser Fir with no stalk attaching the needles. **Hemlock needles attached with a little stalk**

Which tree is the Black Balsam?

When we go up to Black Balsam, we might think there is a tree there that is the "Black Balsam". Maybe the Fraser Fir is the Black Balsam? Or maybe it is the Red Spruce? Both these trees have been called Balsams, though neither one of them is really a Balsam. The old timers distinguished them by calling the Fraser Fir the "She Balsam" and the Red Spruce the "He Balsam". This distinction, (amusingly called 'silly" in Vascular Plants of the Carolinas) doesn't answer the question of which one is really the "Black Balsam" of lore and geographical distinction. I know that when looking out at a hillside of trees when in a high elevation, certain trees do indeed seem "black", as though every bit of light has been sucked right into those dense branches. But which tree is it?

Name That Plant
(even more wonderful than before!)

Lucy Prim

This summer Penny made a wonderful discovery! She noticed that the plant identification site we all love, "Name that Plant" has a new feature. It's a "click here" invitation which says, "Click here to see a map, notes, and images from Weakley's Flora of the Southeastern US." Click it and you will feel like you've gone through the wardrobe! Suddenly, right before you on the screen, is a wealth of information about the plant you're interested in! There's Weakley's map with the icons showing whether it is native or not, and how common it is and where you can find it. Below are splendid pictures showing the plant in crisp detail

.

Look for another invitation: "Show in key(s)". Click here and you find yourself in Weakley's Key! You are right where you want to be, no need to go through the intimidating index or scroll through hundreds of pages.

You can also tap "Show parent" to find out about the family of the plant and from there you can tap "Show children" to learn about other species in this same genus.

This is such an extraordinary resource for us, it almost seems too good to be true. What a wealth of information, and so beautiful and not only that, so convenient to use. I just can't get over how lucky we are to have this.

Alternate Uses for Botanical Names

Penny Longhurst

Don't you hate passwords? Don't you hate having to change passwords and fit their stupid picky rules? Botanical names can be useful because few people know them or can spell them! Unless you use a password manager, try this.

Open up your Radford, Dick Smith, or any botanical text, and flip to the index. Then look for a botanical name that fits the site that requires your password. If it's Amazon look under "A", Google look under "G", Home Depot under "H". Or you could look at one of our recent posts on "Botanical Names Beginning with …". The link to "Botanical Names Beginning with A" is here:
https://wcbotanicalclub.org/2022/11/13/know-your-plants-botanical-names-beginning-with-a/

Look for the botanical name of a plant you recognize (even if only dimly – it's easier as well as educational) that has at least 6 letters and includes some "O's " or L's". These you will convert into "zeros" and "ones". To create a password they consider STRONG, type a curved bracket "(" then the word with the substituted 0's and 1's, finishing up with another curved bracket ")". You could also substitute an exclamation point "!" for an "i" if you need more special characters.

If you want to make it even longer (or fancier) in addition to the genus you could add the specific epithet. Pick your favorite plant but make it one you know how to spell.

So, for Amazon you could choose: (Actaeapachyp0da), (A1etr!sfar!n0sa), (Ambr0sia), (Am0rphafrutic0sa), (Anem0nequinquef01ia), or many more.

For Google you could choose: (Ga1ins0ga), (Ga1iumPi10sum), (Gent!anadec0ra), (Gi11eniatrif01iata), or many more.

For Home Depot you could choose: (Ha1esiacar01ina), (Heucheravi110sa), (Hexasty1isarif01ia), (H0ust0nia10ngif01ia), (Hydr0phy11um), (He1ianthusdecapeta1us), or many more.

Y0u get the !dea.

SHORTIA

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